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EXAMINER

HUYNH, SON P

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/627,139

Applicant(s)

SCHAFFER ET AL.

Examiner

Son P Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed April 20, 2004 have been fully considered but they are not persuasive.

Applicants argue neither Tuzhilin nor Hendricks teaches the generation of two or more sets of predictions. This argument is respectfully traversed.

It is noted that the specification does not clearly define "sets of predictions." Therefore, the "sets of predictions" can be interpreted as sets of programs, movies, restaurants, products, etc.

Tuzhilin discloses providing types of restaurants or types of products based static and dynamic profiles of user (col. 11, line 14+). Clearly, two or more sets of predictions (two or more types of restaurants, products) are generated based on the profile data.

Hendricks discloses the programmer packages the signals by entering certain information into the CAP. This information includes the date, time slot, and program categories, program descriptions, ratings, price, etc. of the various programs. The programmer and the CAP utilize demographic data and ratings in performing the packaging tasks. The operations center may send different groups of programs to

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different cable headends 208 and/or set top terminals (col. 6, line 45+). The headend is able to perform "on the fly programming" changes such as, for example, interactive television services, selection of different foreign languages for the same video (col. 9, line 5+). The user selects particular set or criteria on the screen and only data associated with the selected criteria display on the screen (figures 11a+). Thus, two or more sets of predictions (e.g. two or more criteria, categories, movies, etc. figures 11a+) are generated based on the profile.

For reasons given above, rejection on claims 1-26 is maintained as discussed below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 18-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 18 and 21, line 18, the phrase "the at least two sets" is unclear. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 6, 9-10, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Tuzhilin (US 6,236,978).

Regarding claim 1, Tuzhilin teaches an automated recommendation system, comprising:

a processor (320 – figure 7, col. 13, line 10+) connected to receive source data defining available sources and at least two set of profile data (static profile and dynamic profile- figure 2), each defining user references with respect to the resources (col. 3, line 30+); each of the sets of profile data being derived from a different class of interaction of the user with a first portion of the resource data and usable to predict a given resource's desirability based on each of the sets (user profiles can preferably be generated using static profiles and dynamic profiles. the static profile includes user static characteristics; dynamic profiles consists of rules or patterns characterizing a user's behavior – col. 3, line 40+. User Estimated Purchasing Needs Module 140 uses user profile to recommend items to user – figure 6a);

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the processor being adapted to: generate at least two sets of predictions based on one or a combination of the sets of profile data (generate at least two sets of restaurants, products, based on the profiles – col. 11, line 42+);

combine the predictions by weight averaging corresponding ones from each of the at least two sets of predictions (provides result search of products based on the combination of static and dynamic profiles-Col. 11, line 14+).

Regarding claim 2, Tuzhilin teaches the processor is adapted to:

generate a weighted sum of corresponding records from each of the sets to generate a single combined set of profile data (the static and dynamic profiles are combined to form a combined user profile. items recommended to user based on user profile – col. 4, line 22+ and figure 6).

generate at least one of the set of predictions from the single combined set (recommend products or restaurants, etc. based on the combination of static and dynamic profiles- col. 11, line 15+).

Regarding claim 6, Tuzhilin teaches the at least two profile data sets includes an implicit data set (dynamic profile) derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selections of resource to use (col. 3, line 58+).

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Regarding claim 9, Tuzhilin teaches a method of recommending resources, comprising the steps of:

generating at least two sets of profile data (static profile and dynamic profile) based on expressed preferences of a user with respect to the resources each being usable to predict a given resource's desirability based on each of the sets;

generating at least two sets of predictions based on one or a combination of the sets of profile data (generate at least two sets of restaurants, products, based on the profiles – col. 11, line 42+);

combining the predictions by weight averaging corresponding ones from each of the at least two sets of predictions (provides result search of products based on the combination of static and dynamic profiles-Col. 11, line 14+).

Regarding claims 10, 14, the limitations as claimed correspond to the limitations as claimed in claims 2 and 6 and are analyzed as discussed with respect to the rejections of claims 2 and 6.

6. Claims 1- 4, 6, 9-12, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hendricks et al. (US 6,408,437).

Regarding claim 1, Hendricks teaches an automated recommendation system, comprising:

a processor (microprocessor 602- figure 4) connected to receive source data defining available sources and at least two sets of profile data (e.g. personal profile data and

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mood data – col. 36, lines 24-30), each defining user preferences with respect to the resources (col. 33, line 45+);

each of the sets of profile data being derived from a different class of interaction of the user (user input information and monitoring user's behaviors –learning mode-) with first portion of the resource data and usable to predict a given resource's desirability based on each of the sets (col. 33, line 45+);

the processor being adapted to: generate at least two sets of predictions based on one or combinations of the sets of profile data (generating at least two sets of moods, types, categories, actors, ratings, etc. – figures 11a+ and col. 6, line 45+), and

combining the predictions by weight averaging corresponding ones from each of the at least two sets of predictions (the viewer selects as few or as many of the criteria 1132 as desired. The more selective the resulting list of suggested programs-col. 31, line 19+.

Any type search tool can be used to search the program abstract database. For example, a Boolean search can be used to scan the database of textual entries and retrieve the textual entries that satisfy the Boolean search. Searching method can be combined with the other methods, including viewer profile data and most often watched information. For example, different criteria can be assigned different weights. Then based one an evaluation of the weighted preference entries, only those programs satisfying a minimum weighted index would show up as a selection to be suggested to the viewer – col. 31, line 20+).

Regarding claim 2, Hendricks teaches the processor is adapted to:

generate a weighted sum of corresponding records from each of the sets to generate a single set of profile data (col. 36, line 31+);

generate at least one of the sets of predictions from the single combined set (suggest programs according to the combination of viewer profile data and most often watched information or preference entries - col. 30, line 20+).

Regarding claims 3-4, Hendricks teaches the processor (microprocessor 602 or network controller 214) is connected to control a delivery of resources corresponding to the resource data and responsively to the predictions (figure 4 and col. 8, line 66-col. 9, line 32; col. 10, line 25+).

Regarding claim 6, Hendricks teaches the at least two profile data sets include an implicit data set derived from machined observation of a user's resource use history, whereby the implicit data reflects the user's selections of resource to use (data collected by analyzing a subscriber past behavior-see col. 29, line 60+).

Regarding claims 9-12, 14, the limitations of method as claimed respectively correspond to the limitations of system as claimed in claims 1-4, 6 and are analyzed as discussed in the rejection of claims 1-4, 6.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 7-8, 13, 15-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. (US 6,408,437) in view of Bergh (US 6,112,186).

Regarding claim 5, Hendricks teaches the at least two profile data sets include a feedback data set provided by the user with respect to a particular resource in the resource data (user is asked to answer questions – col. 34, line 30+). However, Hendricks does not specifically disclose the feedback set derived from ratings.

Bergh teaches the feedback set derived from ratings (col. 4, line 33+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks to use the teaching as taught as Bergh in order to provide a specific level of interest of each user.

Regarding claim 7, Hendricks teaches a system as discussed in the rejection of claim 1. However, Hendricks does not specifically disclose input vectors each include feature – value pairs.

Bergh teaches input vectors each include feature-value pairs (see col. 4, lines 15-32 and col. 19, line 29+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks to use the teaching as taught as Bergh in order to improve efficiency in data recommendation system.

Regarding claim 8, Hendricks teaches a system as discussed in the rejection of claim 1. However, Hendricks does not specifically disclose input vectors each include feature – value pairs and a rating value.

Bergh teaches input vectors each include feature-value pairs and a rating value (see col. 4, lines 15-32 and col. 19, line 29+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks to use the teaching as taught as Bergh in order to recommend product to user more accurate according to specific interest level of user.

Regarding claims 13, 15 and 16, the limitations of method as claimed respectively correspond to the limitations of system as claimed in claims 5, 7 and 8 and are analyzed as discussed in the rejection of claims 5, 7 and 8.

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Regarding claim 17, Hendricks teaches a method as discussed in the rejection of claim

9. Hendricks further teaches the sets of profile data includes:

a set of explicitly profile data (information input by user) indicating express indications by a user of preferred classes of programming rather than indication by the user of particular resources that are preferred (col. 31, line 16+);

feedback data set by the user with respect to a particular resource in the resource data (col. 32, line 5+);

an implicit data set derived from machine observation of a user's resource use history, whereby the implicit data reflects the user's selection (col. 29, line 60+). However, Hendricks does not specifically disclose the feedback data set derived from rating provided by the user.

Bergh teaches the feedback set derived from ratings provided by user (col. 4, line 33+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks to use the teaching as taught as Bergh in order to provide a specific level of interest of each user.

Regarding claim 18, Hendricks teaches an automated recommendation system, comprising:

a processor (microprocessor 602- figure 4) connected to receive source data defining available sources and at least two sets of profile data (personal profile data and mood

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data – col. 36, lines 24-30), each defining user preferences with respect to the resources (col. 33, line 45+);

the sets of profile data includes:

a set of explicitly profile data (information input by user) indicating express indications by a user of preferred classes of programming rather than indication by the user of particular resources that are preferred (col. 31, line 16+);

feedback data set by the user with respect to a particular resource in the resource data (col. 32, line 5+);

an implicit data set derived from machine observation of a user's resource use history, whereby the implicit data reflects the user's selection (col. 29, line 60+).

the processor being adapted to generate at least two sets of predictions (types, categories, ratings, etc. figure 11a+) based on one or a combination of the sets of profile data (viewer profile or view preference entries, or information of most watched program- col. 30, line 65+), each of the predictions including a confidence level (weight number – col. 36, line 31+);

the processor being further adapted to combined the predictions by weight-averaging corresponding to one from each of the at least two sets (combining types, categories, ratings, programs, etc. according to weight associated with the categories, programs, etc. corresponding to one from each of programs, categories, etc. 36, line col. 37, line 10+). However, Hendricks does not specifically disclose the feedback data set derived from rating provided by the user.

Bergh teaches an apparatus may be provided to recommend items to a user. The apparatus comprises receiving means which receives ratings (either manually enter by the users or monitor user's environments- see col. 4, lines 20- 67) for items from user; memory element 12 for storing user and items profiles; means 18 for assigning a weight; means 20 for recommending items to the users based on the weights assigned to the users (see figures 1-4 and col. 25, line 57+). Bergh also teaches the predictions including a confident level (confident factor) and the processor being adapted to combine the predictions by weight-averaging corresponding ones from each of the at least two sets (see col. 13, line 16+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks to use the teaching as taught as Berghs in order to provide a specific level of interest of each user.

Regarding claim 19, Bergh teaches the processor is adapted to adjust weights of the weight averaging responsively to a different between the corresponding ones (see col. 11, line 52+ col. 16, lines 56-58).

Regarding claim 20, Bergh discloses the profile of the user may be updated as well as the profile of the item rated, and if the new rating is a change to an existing rating, overwriting the appropriate entry in the user profile (see col. 8, lines 1-10); Bergh further discloses once a set of neighboring users is chosen, a weight is assigned to each of the neighboring user, the weights assigned to such users may be adjust according to

enhance the recommendations given to the user (see col. 11, lines 36-44); and the weighted average of the rating is defined based on user's neighboring users rating (see col. 14, line 16+). Thus, when the weight assigned to each user in the neighboring users set changes, the weighted average is changed. As a result, the processor selectively override the weight averaging responsively to a difference between the corresponding ones.

Regarding claims 21-23, the limitations of method as claimed respectively correspond to the limitations of system as claimed in claims 18-20 are respectively analyzed as discussed in the rejection of claims 18-20.

Regarding claim 24, Hendricks teaches a method of combining profile data, comprising the steps of:

generating first profile data (mood data) by receiving through a user interface (remote control 900) user preferences in the form of expressed generalized preferences corresponding classes of resources (col. 31, line 5+);

generating second profile data (data collected by monitoring user past behavior or answer inputted by user – col. 29, line 60+);

combining the first and second profile data to produce predictions by

applying the first and second profile data to respective prediction engines and

combining respective results thereof (col. 36, line 25+). However, Hendricks does not

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specifically disclose receiving user preferences in form of rating data corresponding to specific resources.

Bergh teaches an apparatus may be provided to recommend items to a user. The apparatus comprises receiving means which receives ratings (either manually enter by the users or monitor user's environments- see col. 4, lines 20- 67) for items from user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks to use the teaching as taught as Berghs in order to provide a specific level of interest of each user.

Regarding claim 25, Hendricks teaches combining the first and second profile data (combining viewer profile data and information of most watched program or preference entries col. 31, line 1+); wherein combining the first and second profiles includes weight averaging corresponding ones of the profile data (see col. 32, line 52+).

Regarding claim 26, Bergh teaches combining respective results includes selectively weight averaging corresponding ones of the predictions (see col. 13, line 50+).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rosser (US 6,446,261) teaches set top device for targeted electronic insertion of indicia into video.

Serbinis et al. (US 6,584,466) teaches Internet document management system and method.

Maissel et al. (US 6,637,029) teaches intelligent electronic program guide.

Ottesen et al. (US 5,778,135) teaches real time edit control for video program material.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P Huynh whose telephone number is 703-305-1889. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Son P. Huynh
June 16, 2004



VIVEK SRIVASTAVA
PRIMARY EXAMINER